REMARKS/ARGUMENTS

Claim Amendments

The Applicant has amended claims 1, 3-4, 6, 8, 20, 25-26 and 28. Applicant respectfully submits no new matter has been added. Accordingly, Claims 1-20 and 24-41 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

Examiner Objections - Claims

The Examiner objected to Claims 20 and 24-41 as being directed to software per se. The Applicant appreciates the Examiner's thorough review of the claims. The Applicant has amended the claims as suggested by the Examiner and the Examiner's consideration of the amended claims is respectfully requested.

Examiner's Response:

The Applicant appreciates the guidance provided by the Examiner and the detailed explanation of the reasoning regarding the rejection. The Applicant has amended the claims to provide more detail about the Analysis Entity. The amendments are supported by the Specification at page 15, lines 25-28, Figure 6, and page 32, lines 9-21. The limitation commented on in the Examiner's Note regarding "determining an appearance of the rate modulation" has been amended. The limitation added to claim 20 is to distinguish the claim as a hardware claim. Support for the amendment can be found in the art as it is well known that a receiving unit and a transmission unit in a telecommunications system utilizes microprocessors and the accompanying memory to process transmitting and receiving actions. The Applicant believes that the current amendments more clearly represent the limitations of the subject claims and respectfully request reconsideration of the amended claims.

Claim Rejections – 35 U.S.C. § 103 (a)

The Examiner rejected claims 1-16, 18, 20-38 and 41 under 35 U.S.C. § 103(a) as being unpatentable over Yano, *et al.* (US 6,701,372) in view of Jain, *et al.* ("End-to-End Available Bandwidth: Measurement Methodology, Dynamics, and Relation with

TCP Throughput"), hereinafter "Jain". The Applicant respectfully traverses the rejection of these claims.

The Applicant notes that the Analysis Entity, though not fully defined by the Applicant, has been is compared to a network in the Yano reference. As noted above the Applicant has amended the independent claims to provide a better definition of the Analysis Entity

As noted previously, the Applicant's present invention discloses an Analysis Entity (AE) that receives data flow and modulates the packets according to a particular modulation rate and then sends the packets to a receiving entity. The AE compares the sending rate of the sending entity and the receiving rate of a receiving entity. The comparison helps detect a presence of the modulation rate. This knowledge of the relation and the presence of the rate modulation in the receiving rate provides the Analysis Entity with information to distinguish the case that the transmission rate of the transmission link is equal to or above the sending rate, which provides information about transmission capability of the link between the AE and the receiving entity. "As an example, the sending entity SE may not be interested in receiving information about the transmission rate if the analysis entity obtains that the transmission rate exceeds or is equal to the sending rate. If the predetermined criteria are not matched the analysis entity can explicitly inform the sending entity SE about the mismatch. This procedure reduces the signaling effort." (page 23, line 28 to page 24, line 2) The Analysis Entity is more about matching the sending rate with the transmission rate (page 8, lines 11-17).

The Yano reference discloses that a transmission rate is determined and supplied to a data transmitter. A receiver report is sent from the receiver to a buffer data volume calculator and a rate change unit determines a transmission rate on the basis of calculations by the buffer data volume calculator that "designates" a transmission rate to the transmitter (Col. 3, lines 14-23). "The transmission rate change unit determines the transmission rate on the basis of the data volume calculated by the network buffer data volume calculator..." (col. 3, lines 25-28) and "...[t]he transmitting terminal calculates the volume of data which has been output from the transmitting terminal onto the network but has not reached the receiving terminal." and "...[t]he volume of data is referred to as a network buffer data volume hereinafter." (col. 4, lines 13-18) The data

volume is calculated and "A network buffer data volume ... is obtained by multiplying a packet size ... by the difference between a sequence number ... of the last packet output from the transmitting terminal and a reception sequence number ... included in the receiver report..." (col. 4, lines 20-25).

As noted in the Yano reference's Summary the object of the invention is "...to reduce deterioration in the real time communication case by the volume of un-arrived data on the network." Yano discloses the network buffer data volume calculator that calculates the amount of data sent but not yet received and this volume of data is used as a measurement to adjust the transmission rate of the data transmitter so that the volume is not plugging up the channel. This is different from the Applicant's present invention which modulates the sending rate, determines the relation between the obtained modulated sending rate and the non-modulated sending rate to determine the transmission link capability.

The Jain reference is cited for disclosing a receiving rate and a sending rate to determine a relation, then obtaining information about the transmission capability based on the relation (Avail-bw detection and measurement). The Applicant agrees that Jain discloses a method of determining a packet flow rate, but the flow rate is a comparison of input and output rates of packet pairs. Jain describes "...the TOPP and SLoPS techniques that are based on observation of queueing delays of successive periodic probing packets [that] increase when the probing rate is higher than the avail-bw in the path." The input and output rates of packet pairs are compared, not the sending and receiving rates, as in the Applicant's present invention, wherein the sending rate includes a modulated rate. And, detection of the modulated rate in the receiving rate dictates certain adjustments by the AE. This is not present in the Jain reference.

As discussed above, claim 1 contains elements which are not found in either the Yano or the Jain references. It is submitted that the combination of Yano and Jain do not teach or suggest all of the claim elements of claim 1. The Applicant, therefore, respectfully requests the allowance of claim 1, analogous independent claim 20 and the respective dependent claims 16, 18, 21-38 and 41.

The Examiner rejected claims 17, 19, 39 and 41 under 35 U.S.C. § 103(a) as being unpatentable over Yano, et al (US 6,701,372) in view of Jain, et al. ("End-to-End Available Bandwidth: Measurement Methodology, Dynamics, and Relation with TCP Throughput) as applied to claims 1 and 14 above, and further in view of Anandakumar, et al (US2004/0252701). The Applicant respectfully traverses the rejection of these claims.

Claims 17, 19, 39 and 41 depend from independent claims 1 and 20 and recite further limitations in combination with the novel elements of claims 1 and 20. The Anandakumar reference is cited for disclosing the use of proxies and method of measuring and analyzing transmission rates and capabilities. The Applicant respectfully submits that Anandakumar does not teach or suggest the elements that are lacking in the Yano and Jain references. Therefore, the allowance of claims 17, 19 38 and 41 is respectfully requested.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

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